Accelerated Settlement: Why T+1 Is Everyone's Business

T+1 settlement accelerates the settlement cycle—but beneath that simple definition lies a complex web of implications and interdependencies that affect every participant in the trade lifecycle. The Industry Committee's High-Level Roadmap reflects this very notion. As the theme centers on settlement, we will begin our deep dive into the settlement recommendations. These recommendations are not merely technical checklists; they are strategic enablers designed to support a market-wide transformation.

Settlement Recommendations: Clearstream Empowers Clients with T+1 Conversion Capabilities

Instruction Management

#	Recommendations	Clearstream readiness
ST-01.1	Real-time processing of settlement instructions	\square
ST-01.2	Automated / STP instruction processing	\square
ST-01.3	Establish an Industry Taskforce to develop a single 'gold standard' format for settlement instructions	
ST-01.4	Custodians to offer PSAF information in Statement of Holding	\square
ST-01.5	Use of dynamic cash and stock forecasting tools	\square
ST-01.6	Use of Transaction type identifier in settlement instructions	

The Instruction Management recommendations aim to accelerate the settlement instruction process under T+1 by promoting real-time, automated, and standardized processes. Key goals include matching instructions at the (I)CSD before the settlement cycle at the CSD begins, eliminating manual processes to reduce risk and latency, and developing a "gold standard" for settlement instructions. Additional measures focus on enhancing transparency by reporting Place of Safekeeping (PSAF) in the statement of holdings, improving the forecasting of cash and securities positions, and ensuring consistent the use of transaction type identifiers. These measures all contribute to a more efficient and predictable settlement environment.

Real-Time and Automated Instruction Processing

Due to the short time T+1 provides market participants before the settlement processes begin at the CSD, there is only limited time to match and prepare a settlement instruction for settlement. If someone relies on a manual process today to prepare and send a settlement instruction to the CSD or its Custodian, valuable time for the matching process may be lost if discrepancies have to be solved. This problem is amplified when trading parties are not CSD participants, as their settlement instructions must be routed through a chain of custodians. Each institution

must validate and assign the settlement instruction to the respective accounts, and then potentially route it to the next party in the chain, which can be time-consuming in case of manual intervention.

Clearstream has been supporting real-time, STP processing of client instructions across our CSD and ICSD platforms. Instructions are processed automatically, regardless of the Intended Settlement Date (ISD). We accept a wide range of ISO transaction type codes to support CSDR and the recommendations put forward by the EU T+1 Industry Committee.

Importantly, Clearstream clients—such as custodians, brokers, and settlement intermediaries—could extend these capabilities to their own clients.

This means intermediaries can:

- Route client instructions through Clearstream's STP infrastructure.
- Offer real-time processing and enriched instruction formats.
- Ensure compliance and efficiency across the entire settlement chain.

This layered service model allows Clearstream's clients to deliver high-quality settlement services downstream and act as enablers of market best practices.

Curious to see how this works, look at our client handbooks:

- CSD Instruction Formats (CBF): CBF Client Handbook
- ICSD Instruction Formats (CBL): <u>CBL Client Handbook Instruction Formats</u>

Standardization and Market Practices

The fastest and most efficient instructions probably won't be matched if they don't follow the industry's accepted rules. These market practices are embedded in the usage guidelines for the settlement instructions and shall help with the speedy processing of them straight through all involved systems. This allows them to be present at the CSD and be ready to match as early as possible. Should those not be followed, validations at the CSD or the custodians may fail, requiring manual intervention to get a message out of a reject queue.

Clearstream actively supports industry efforts to harmonize settlement instruction formats via the "Golden Standard Instruction" through its involvement in the Industry Committee, particularly as the co-chair of the Settlements workstream and the chair of the Securities Market Practices Group (SMPG) in Germany.

Transparency and Forecasting Tools

Due to the short timeframe between trading and settlement, it will be important to know the total amount required to pay for all purchases. Market participants active in multiple markets will also need to know where their assets are at any given moment. Nothing is worse than having the shares in your account in one market while the transaction should be settled in another market. If this discrepancy is not identified early, there is a high risk of transactions failing to settle, which can result in penalties.

Regular reconciliation of own records with externally reported positions is a must, and it should not only confirm the number of securities but also ensure they are in the correct location. The Place of Safekeeping (PSAF), which is integrated into the statement of holdings, gives a good indication of this. Clearstream already offers this feature today, enabling better position management and pending transaction monitoring.

In addition, with money being a scarce resource, market participants may only fund their accounts to the extent that the cash is required for settlement. Without proper prognostic and forecasting tools, this will remain guesswork and could lead to excess cash remaining in the account when it could be earning interest if invested otherwise. On the other hand, insufficient cash could lead to failed transactions, incurring penalties again. **Dynamic cash and securities forecasting tools**, such as the Asset liability analyzer and Settlement Prediction Tool, highlighted in the next section that support intraday liquidity planning and funding optimization.

These tools help clients manage their inventory more effectively and allow them to **share these insights with their end clients.** This enables more proactive, data-driven decision-making across the custody chain.

Securities Settlement System (SSS) Timings

#	Recommendations	Clearstream readiness
ST-02.1	SSS Opening	Under industry discussion
ST-02.2	SSS Closing: Establish a DvP cutoff of 16:00 for standard settlement in EUR and a FoP cutoff of 18:00	
ST-02.3	SSS Closing: Alignment of non-EUR European currencies to DvP cutoff of 16:00	
ST-02.4	SSS Closing: Explore the establishment of a DvP cutoff of 17:00	\square
ST-02.5	Interaction with other global regions	

The Securities Settlement System (SSS) Timings recommendations focus on maximizing the harmonization of the settlement day across EU markets in a T+1 environment. The recommendations aim to extend operational windows by optimizing SSS opening times and standardizing DvP and FoP cutoffs, particularly by setting a 16:00 DvP cutoff for EUR and aligning other European non-EUR currencies accordingly. The recommendations also propose analyzing the feasibility of a later 17:00 DvP cutoff and emphasize the importance of maintaining access to global currencies to support cross-border settlement under compressed timelines.

Settlement Windows and Global Alignment

The start of the settlement process will probably be the biggest change in settlement processing timelines. With the compressed time between trading and settlement, there is not only little time for off-exchange transactions but also for the exchanges. As trading hours continue to be extended (some markets are even considering continuous trading), there needs to be some time for Central Counterparties (CCPs) to process all those transactions and complete their netting runs so that counterparty risk and the number of settlement instructions can be significantly reduced. Since all this requires time, the recommendation from the Industry Committee is that Settlement Processing should start at Midnight. The technical changes are still under discussion. As one can imagine, this is probably not only a change in schedule but has an impact on all connected parties.

This will also require quite a bit of testing before all market participants are used to the new settlement timings and know when to receive the reporting from the night-time to process and send new instructions.

Clearstream is very active in the discussions on this topic in T2S to ensure that the interests of all stakeholders are properly considered. Once implemented, we will follow the new T2S schedule, aligning with industry recommendations for T+1 settlement. Settlement will then be possible from midnight until 16:00 CET for **Delivery-versus-Payment (DvP)**, while **Free-of-Payment (FoP)** instructions can settle until **18:00 CET**. For CBL, we will revise all timelines against the industry recommendations to ensure that cutoff times remain competitive.

When you compare this to the current timelines provided below, it becomes apparent that not only is the time for settlement instructions input shortened, but also the time to process settlement is significantly reduced.

- Settlement Via T2S
- Settlement Timings Matrix

It is not surprising that discussions are taking place on how to extend the settlement window. As part of our ongoing industry collaboration, Clearstream also contributes to the analysis of a potential 17:00 DvP cutoff, supporting broader market harmonization. The outcome remains to be seen, as a change in the DvP cutoff will also impact areas beyond pure securities settlement, i.e. treasury and liquidity management. These need to be well balanced to find a workable compromise.

Tools and Functionalities

#	Recommendations	Clearstream readiness
ST-03.1	Partial settlement functionality (I)CSDs	\square
ST-03.2	Partial settlement functionality (Intermediaries)	\square
ST-03.3	Establish Industry Taskforce to develop Partial Settlement Market Practice	\square
ST-03.4	Inclusion of partial settlement window in the first cycle of T2S NTS (C1SX)	\square
ST-03.5	Hold & Release functionality - (I)CSDs	\square
ST-03.6	Hold & Release functionality - Intermediaries	\square
ST-03.7	Intermediaries use of 'Hold & Release'	\square
ST-03.8	Allegements - (I)CSDs & Intermediaries	\square
ST-03.9	POA Functionality	\square
ST-03.10	Liquidity Tools & Functionalities	\square
ST-03.11	Timely processing of transactions in non-EU currencies	
ST-03.12	Auto-borrowing facilities	
ST-03.13	Maximizing bilateral and multilateral netting	
ST-03.14	Auto-collateralization facilities	

The **Tools and Functionalities** recommendations are a mix of existing and new functionalities aimed at ensuring high settlement efficiency and limiting unmatched transactions in a T+1 environment. These include **partial settlement**, **Hold and Release**, **exception handling**, and **liquidity optimization**—all supported by standardized market practices and advanced data solutions.

ST-03.1 - ST-03.7: Partial Settlement and Hold/Release

Hold and Release are a crucial part of custodians' use of omnibus accounts to manage their client's holdings efficiently. With Hold/Release, clients can have the instruction in the market ready to be matched, while at the same time not being at risk of an instruction settling without the underlying client having sufficient positions to fulfill the

delivery. Without this functionality, custodians would have to resort to the past practice of only sending settlement instructions to the market when the client had the position in place. Doing this today would mean that whoever sends their instructions last-after the intended settlement day-will be charged with a penalty.

Another important element in achieving higher settlement efficiency is the use of partial settlement and partial release. If a party does not have sufficient holdings to fully satisfy the amount of securities to be delivered, a partial delivery could provide at least some securities to its counterparty. This would have two positive effects, (i) the failing counterparty limits the amount of penalties to only the outstanding amount, and (ii) the receiving counterparty receives some securities, which could already be used for (partial) onward deliveries. These partial deliveries could then fuel the cycle of turnaround deliveries by injecting liquidity and allowing for more transactions to settle, thereby increasing overall settlement efficiency.

The functions of Hold & Release and Partial Release are part of Clearstream's core product offering and give clients granular control over instruction execution, helping reduce settlement fails—especially critical under T+1, where timing is compressed and intraday liquidity is tighter.

Support for partial settlement is core to Clearstream across both its CSD (T2S) and ICSD platforms, including Bridge deliveries, allowing trades to settle in parts when full securities aren't available. Clients can manage this via the Xact Web Portal, SWIFT MT530, SESE.030, or the PART flag.

Clearstream has been a pioneer in this space, being the **first ICSD to implement Partial Release** and actively shaping market standards through **SMPG**. Reporting enhancements such as **SWIFT PREL and PATD codes**, now adopted by T2S, reflect this leadership.

Ongoing initiatives in T2S, such as a Change Request to settle partially released instructions immediately upon release (T2S-0827-URD) or to allow partial settlement of transactions under the conditional securities delivery flag (COSD) (T2S-0798-URD) continue to expand partial settlement capabilities, particularly for T2S CSD-Out flows, reinforcing Clearstream's commitment to settlement efficiency and client service in a T+1 environment.

For the detailed overview of our services, refer to:

- Overview of how Clearstream automates partial settlement from domestic markets, with SWIFT MT support and access via CreationOnline
- T2S Partial Settlement Windows
- Clearstream Hold/Release & Settlement Sequence Management

ST-03.8-ST-03.14: Exception Handling, Liquidity and Collateral Tools

As the financial industry accelerates toward T+1 settlement, institutions face mounting pressure to manage operational timelines, liquidity buffers, and exception handling with greater precision. The shortened settlement cycle leaves less room for error—issues must be resolved faster, funding mobilized more efficiently, and collateral optimized in real time to avoid costly fails and penalties.

Exception Handling

With sometimes less than 24 hours to react, any mismatch needs immediate attention. And of course, it will be important to know as soon as possible when one's own instruction is missing in the market. CSDs today offer so-called allegement notifications to their clients to indicate that there is an instruction waiting at the CSD which could not be matched because an instruction from the client is missing. This could indicate that (i) a trade at the client has not been booked or instructed, (ii) the trade has mismatches in economic details such as price or delivery path, or (iii) that there is an error at the counterparty and the instruction was not intended for the client. In cases (i) and (ii), the client needs to react and check internally or bilaterally with the counterparty who has the correct transaction details and who will likely need to send new instructions. In case (iii), the counterparty may want to know that this transaction is not recognized by the client so that they can investigate on their side.

Clearstream's Allegement Notifications provide real-time alerts for unmatched trades, enabling early intervention and reducing the risk of settlement delays. Complementing this is the Settlement Dashboard and Prediction Tool, available via the Xact Web Portal, which offers clients real-time visibility and Al-powered insights.

These tools help clients:

- Act early by forecasting potential settlement fails up to four days in advance based on historical experience.
- Reduce penalties by identifying instructions with high penalty exposure and rectifying potential causes of failure to get them settled in time.
- Resolve issues faster by pinpointing the top root causes of potential failures.
- Optimize operations by anticipating bottlenecks and reallocating resources to where it really matters.
- Monitor settlement outcomes across LuxCSD, CBL, and CBF accounts.

Clearstream's predictive analytics are not just helpful—they're essential for **T+1 readiness**. Learn more about <u>how to</u> boost settlement efficiency in a short video.

Fails Management Automation

To streamline fails resolution, Clearstream offers two key pillars of automation. First, unmatched instructions are automatically recycled, and bilateral cancellation workflows reduce manual effort, ensuring smoother settlement continuity. This is a standard feature in CSDs today and clearly helps keep the number of instructions at the CSD aligned with internal systems. Unlike previous years, when instructions not settled at the end of the settlement day were automatically cancelled, clients had to reinstruct them, undergoing the matching process again.

Second, **Automated Securities Lending (ASL) provides** coverage for delivery shortfalls, supporting timely settlement and minimizing penalties. ASL is available across a wide range of asset classes, including ETFs, and plays a vital role in maintaining settlement discipline under T+1.

Together, these services enhance operational resilience and reduce settlement risk.

Automated Securities Lending

Loan opening



Explore Clearstream's ASL Services to enhance settlement efficiency, prevent delivery shortfalls, and ensure timely trade execution through automated securities lending.

- ASL Services Overview
- Securities Lending & Borrowing

Power of Attorney

Under T+1, POA accelerates instruction management, reduces unmatched trades, and improves operational velocity. It is widely adopted by CCPs as a standard automation tool. This functionality, compliant with ISO 20022 and 15022 standards, enables delegated instruction handling and seamless integration with collateral workflows. It also addresses potential issues caused by time-zone differences, where the allocation/confirmation process can only be completed after one counterparty's business day has ended.

Download the latest POA forms: POA ISO 20022 Forms

Liquidity and Collateral Optimization

Clearstream's integrated liquidity and collateral services are designed to help clients anticipate shortfalls, mobilize assets efficiently, and maintain funding continuity:

- Credit Lines via CBL offer centralized management across all client accounts, enabling real-time funding
 flexibility through pooled collateral. This setup supports faster liquidity deployment, helping institutions meet
 tighter settlement deadlines with reduced friction.
- T2S Auto-Collateralization, available through CBF, automatically mobilizes eligible securities to cover cash shortfalls during settlement. Closely linked with the European Collateral Management System (ECMS), this feature ensures seamless access to central bank liquidity and harmonized collateral flows. In a T+1 environment, where funding windows are compressed, auto-collateralization becomes essential for real-time collateral generation without manual intervention.

Learn more about T2S Auto-Collateralization: ECMS & T2S Auto-Coll Overview

- Netting Capabilities—both bilateral and multilateral—reduce the number of settlement instructions and funding requirements by offsetting buy and sell positions across counterparties. For example, if a client buys 1,000 securities and sells 900 of the same type, only the net difference of 100 needs to be funded and settled. These algorithms run continuously across thousands of settlement cycles per day, adapting to the complexity of each transaction set. Under T+1, netting is critical to minimizing gross settlement volumes and optimizing liquidity usage.
- Netting Algorithms Overview
- CBF Strategic Expansion: Making More Markets T2S Eligible for T+1 Readiness

Clearstream's infrastructure supports auto-collateralization and technical netting through CBF's integration with T2S, leveraging batch settlement cycles and central bank money (CeBM) for efficient EUR settlement.

Meanwhile, CBL complements CBF by handling non-EUR and international transactions, ensuring optimized flows for both domestic and cross-border clients.

Advanced Liquidity Intelligence

To further enhance visibility and control, Clearstream offers two advanced tools:

 The <u>Asset Liability Analyzer</u> (CBL) provides a real-time dashboard via the Xact Web Portal, offering insights into credit line usage, blocked transactions, and collateral allocation. This empowers clients to make informed decisions and reduce risk.



OSCAR, Clearstream's Al-powered collateral engine, uses machine learning and automated reasoning to
intelligently allocate collateral, optimize asset usage, and support real-time funding decisions. In a T+1
environment, where speed and precision are paramount, OSCAR helps institutions stay agile and settlementready.

Together, these services form a comprehensive framework for managing the complexities of T+1 settlement. By combining automation, predictive analytics, and real-time liquidity tools, Clearstream enables clients to reduce risk, enhance operational efficiency, and maintain control in a faster-paced settlement landscape.

What Clients Can Do Now

All the above services are already available today. If not already done, clients can:

- 1. Make use of partial settlement and hold/release.
- 2. Make use of PSAF and own depot management activities.
- 3. Subscribe to allegement alerts.
- 4. Use forecasting tools.
- 5. Review cutoffs and instruction formats.

Next Steps

- 1. Assess your readiness for T+1 across all operational layers.
- 2. Engage with your partners and service providers to align on cutoffs, formats, and workflows.
- 3. Reach out to us at <u>t+1@clearstream.com</u> with any questions and follow our <u>newsletter</u> to stay apprised on how to navigate T+1 effectively.
- 4. Leverage Clearstream's solutions to streamline your pre-settlement and settlement processes.

Conclusion

Clearstream is committed to supporting a smooth transition to T+1. By leveraging existing services and aligning with industry recommendations, clients can ensure readiness well ahead of the October 2027 deadline.

Download the full Recommendations table here and assess your readiness

Watch out for our next piece on Partial Settlements!

"We're green on T+1. Let's get there together."